METHOD AND SYSTEM FOR AUTOMATING ISSUE RESOLUTION IN MANUFACTURING EXECUTION AND MATERIAL CONTROL SYSTEMS

ABSTRACT OF THE DISCLOSURE

Automatic error recovery systems and methods for automated manufacturing plants and factories are disclosed. Such facilities normally have multiple automated control systems, including an automated material handling system (AMHS), all of which run automatically, typically under the control of a computerized manufacturing execution system (MES). The disclosed issue resolution (ISR) systems and methods involve providing components, which may be supervised and operated by an issue resolution management (ISRM) system, if desired, that interfaces with the MES, AMHS, and/or production control system(s) which operate the tools and other stations within the automated factory. The components, which may be considered customized logic cells, may each be written for handling a specific kind of incoming error condition, problem or other issue that might occur and which is amenable to automatic resolution or recovery. These errors often occur between or across the boundaries of the various interactive systems and automated equipment. Each cell may cycle through a sequence of possible error resolution or recovery steps until the specific issue is resolved or until the sequence of steps is exhausted. Other components of the ISR system may provide results-oriented messages and/or facilitate the collection of data as to whether and which corrective commands from the ISR system resolved the reported error conditions automatically. The disclosed ISR systems and methods for resolving errors and other issues automatically helps improve the overall productivity of automated factories by reducing downtime and the need for human intervention to correct problems, thereby increasing factory throughput.